



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/726,613	10/07/96	MORI	50184

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1381/1216

EXAMINER

CHU, J

ART UNIT

PAPER NUMBER

1113

DATE MAILED: 12/16/97

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/726,613

Applicant(s)

Mori et al

Examiner

John Chu

Group Art Unit

1113

☒ Responsive to communication(s) filed on Feb. 19, 1997 and October 28, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire Three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-21 is/are pending in the application.

Of the above, claim(s) 16, 17, and 21 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 2, 8-11, and 18-20 is/are rejected.

☒ Claim(s) 3-7 and 12-15 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

This Office action is in response to the election received October 28, 1997 and the IDS received July 19, 1997.

1. Claims 16, 17 and 21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made **without** traverse in Paper No. 5.

2. *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

1. Claims 1, 2, 8-11, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen et al.

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The claimed invention is drawn to a photoresist composition comprising a resin binder, a photoactive component and a dye compound that contains anthracene groups.

Allen et al discloses a photoresist composition comprising a polymeric component that is base insoluble and has photolabile groups, a photoacid generator capable of forming an acid and photosensitizer found in column 6, line 60 et seq wherein anthracene is used.

3. Claims 1, 8-11, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sachdev et al.

The claimed invention has been recited above and is included by reference.

Sachdev et al discloses a crosslinkable photoresist composition comprising a polymer binder, an acid catalyzable crosslinking agent and a photoacid generator. Applicants are directed to col. 7, lines 8-16 for the use of an anthracene methanol and examples 1, 7, 11 and 14 for the use of anthracene methanol which anticipate the claims above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8-11 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al.

The claimed invention has been recited above and is included by reference.

Kobayashi et al discloses chemically amplified resist composition comprising a blocked resin, a photoacid generator and a dissolution inhibitor or crosslinking agent and other additives. The additives include anthracene as a sensitizer as cited in column 13, line 66.

Kobayashi et al lacks an explicit example using the recited anthracene.

It would have been *prima facie* obvious to one of ordinary skill in the art of photoresist compositions to use as a sensitizer an anthracene dye as stated in Kobayashi et al and reasonably expect same or similar results as disclosed in Kobayashi et al. Motivation is provided by the reference at column 13, lines 59 et seq.

5. Claims 3-7 and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the references of record disclose or suggest the claimed dye polymer that contains anthracene groups at the molecular weight claimed as well as the specific polymer of claims 6, 7 and 15

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Lamola et al discloses a near UV resist composition comprising phenothiazine sensitizers.

Kondo et al discloses a photopolymerizable composition using acridine derivatives as sensitizers.

Feely discloses a photoresist composition comprising a acid hardening system, photoacid generators and phenothiazine dyes as seen in column 4, line 45.

Kakumara et al '433 and '377 disclose a substituted acridine sensitizers for use in photopolymerizable compositions.

Minami et al discloses a photopolymerizable composition also using acridine compounds as photoinitiators.

Knors et al discloses polymeric dye ingredients in antireflective compositions.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (703) 308-2298. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

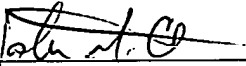
The fax phone number for this Group is (703) 305-3599.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



John S. Chu
Primary Examiner, Group 1100

J.Chu
December 12, 1997